

Application Number 10/807,822
Amendment in response to Office Action mailed March 18, 2008

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A method of creating a data storage disk master, the method comprising:

creating a plurality of three or more equally spaced and focused laser spots; and
simultaneously illuminating a photoresist layer of the master with the plurality of focused laser spots to photolithographically expose a plurality of tracks of the master such that track pitch variations on the master are less than five nanometers.

Claim 2 (Original): The method of claim 1, further comprising creating the plurality of focused laser spots from a single laser by optically separating light from the laser into a plurality of light beams corresponding to the plurality of focused laser spots.

Claim 3 (Original): The method of claim 1, further comprising creating the plurality of focused laser spots using a plurality of different lasers.

Claim 4 (Original): The method of claim 1, wherein creating the plurality of focused laser spots comprises creating a one-dimensional array of focused laser spots.

Claim 5 (Original): The method of claim 1, wherein creating the plurality of focused laser spots comprises creating a two-dimensional array of focused laser spots.

Claim 6 (Original): The method of claim 1, further comprising simultaneously illuminating the photoresist layer of the master a plurality of times with the plurality of focused laser spots.

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Claim 7 (Original): The method of claim 1, further comprising:

translating the plurality of focused laser spots relative to the photoresist layer by an integer number of the tracks; and

simultaneously illuminating the photoresist layer of the master with the plurality of focused laser spots to photolithographically expose a different plurality of tracks of the master.

Claim 8 (Original): The method of claim 7, further comprising:

repeatedly translating the plurality of focused laser spots relative to the photoresist layer by the integer number of the tracks over substantially an entire surface of the master; and

repeatedly simultaneously illuminating the photoresist layer of the master with the plurality of focused laser spots over substantially the entire surface of the master.

Claim 9 (Canceled).

Claim 10 (Original): The method of claim 7, wherein the master defines a track width equal to a distance between each of the plurality of focused laser spots.

Claim 11 (Original): The method of claim 7, wherein the master defines a track width less than a distance between each of the plurality of focused laser spots.

Claim 12 (Currently amended): A method of creating a data storage disk master, the method comprising:

creating an interference pattern from laser light, the interference pattern defining a plurality of constructive interference fringes; and

simultaneously illuminating a photoresist layer of the master with the plurality of constructive interference fringes of the interference pattern to expose a plurality of tracks of the master such that track pitch variations on the master are less than five nanometers.

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Claim 13 (Original): The method of claim 12, wherein creating the interference pattern comprises creating an interference pattern that includes the plurality of constructive interference fringes in a one-dimensional array.

Claim 14 (Original): The method of claim 12, wherein creating the interference pattern comprises creating an interference pattern that includes the plurality of constructive interference fringes in a two-dimensional array.

Claim 15 (Original): The method of claim 12, further comprising creating the interference pattern using a prism.

Claim 16 (Original): The method of claim 12, further comprising simultaneously illuminating the photoresist layer of the master a plurality of times with the interference pattern.

Claim 17 (Currently amended): The method of claim ~~12~~, ~~14~~, further comprising:
translating the plurality of constructive interference fringes of the interference pattern relative to the photoresist layer by an integer number of the tracks; and
simultaneously illuminating the photoresist layer of the master with the interference pattern to expose a different plurality of tracks of the master.

Claim 18 (Currently amended): The method of claim 17, further comprising:
repeatedly translating the plurality of constructive interference fringes of the interference pattern relative to the photoresist layer by an integer number of the tracks over substantially an entire surface of the master; and
repeatedly simultaneously illuminating the photoresist layer of the master with the interference pattern over substantially the entire surface of the master, ~~wherein track pitch variations on the master are less than five nanometers.~~

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Claim 19 (Original): The method of claim 17, wherein the master defines a track width equal to a distance between each of the plurality of constructive interference fringes of the interference pattern.

Claim 20 (Original): The method of claim 17, wherein the master defines a track width less than a distance between each of the plurality of constructive interference fringes of the interference pattern.